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neath yellow, reticulated with ferruginous. The prolongation of its secondaries is less, and the upper surface of the primaries has nine black spots. From North America.

Boisduval and Leconte in their *C-aureum*, describe the upper side of the inferiors as brown, or of an obscure ferruginous glossed with bluish green, with the base of a bright ferruginous. The outline of their figure approaches very nearly to that of *umbrosa*, but the representation of the inferiors differs widely from it, in that less than their inner half along the internal margin is shaded lightly with brown, while the rest of the wing is fulvous and distinctly spotted with black as in *interrogationis*. In their synonymy, they cite *C-aureum* of Cramer, of Fabricius in Ent. Syst., and of Smith-Abbot; the *interrogationis* of Godart (p. 301, n. 15,) and of Fabricius in Supp. Ent. Syst.

From the above it is evident that *umbrosa* is not the *C-aureum* of Fabricius, Smith and Abbot, Boisduval and LeConte, or the *interrogationis* of Godart, and is justly entitled to its indication as a new species.

*New York State Cabinet of Natural History*, May 1869.

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## Descriptions of two ACARIANS bred from the White Maple (*Acer dasycarpum*).

BY HENRY SHIMER, M. D.

### VASATES, nov. gen.

Abdomen long, tapering to a point, with two long anal setæ. Legs *four* in number. Inhabits galls. Movement not rapid.

**Vasates quadripedes**, n. sp.—Body pale yellowish or yellowish-red, elongated to a point behind and terminated by two long slender hairs. Legs directed forward and quite at the anterior extremity, four in number, of the two posterior pairs, usually found in acarians, there is positively not the slightest trace, even in the most mature specimens; a few hairs are scattered over the legs, the foot appears to be 3-jointed, and is terminated by spines or hairs, tibiæ short. Length, 008—.005 inch.

*Gall* on the upper side of the leaf, by a small pedicel; form angular, wrinkled and pitted; at first green, but at length becoming reddish; the opening beneath is very small and surrounded with a little woolly down; size variable, say from one-twenty eighth to one-eighth of an inch in diameter.

For several years I have observed these galls in the early part of the summer. In the early spring as the leaves begin to expand from the bud, these galls, of very minute size, may be seen forming on the leaf. They appear first on the lower limbs and leaves next to the body of the tree, hence it appears probable that they pass the winter—perhaps in the egg-state—on the ground around the tree, and in early spring ascend the trunk. As spring passes into summer, I observe many leaves entirely covered with these galls, so that the leaf is dwarfed. curls up and sometimes drops off; a thousand or more galls are sometimes found on a single leaf. In June I observed in the galls numerous whitish, translucent eggs, and larvæ in abundance; these latter are falciform and very sluggish and without much observable motion. After about two weeks, I saw them in great numbers, crawling about on the leaves, having left the galls to ascend to the body, doubtless for the purpose of establishing new galls; one fine warm days, thousands may be seen on one leaf. Some spider webs on the under side of the leaves serve as traps for these creatures, where they accumulate in such numbers as to give the web a pale reddish color, although the individual acarians are undistinguishable to the naked eye. The galls continue during the summer, but later many of them become black and *dry and very few of the green ones then contain inhabitants.*

### **ACARUS**, Linn.

**Acarus aceris**, n. sp.—*Imago.* Thorax yellowish-brown, legs inclined to same color; a grayish central line on the back, on each side of which there is sometimes another line of like color; a number of whitish hairs about as long as the legs are scattered over the body; tarsi 3-jointed, with two claws and a number of hairs: head rounded, depressed, grey, forehead slightly emarginate. Length of body 0.13 inch; to end of extended forelegs, .02 inch.

*Pupa* of various colors, from pale greenish-grey to blackish, with a few comparatively long hairs; legs greyish, translucent; head and anterior part of body pale. The very young larvæ are nearly white.

*Eggs* globular, milk-white, 0.04 inch in diameter, placed on under side of the leaf.

In June these acarians were quite numerous on the underside of the leaves, and a number of their moulted skins were observed, principally along the veins of the leaf. I sometimes find this species on the same leaves in company with *Vasates quadripedes*. From observing their motions, and from often finding them without any other probable food, I concluded that they feed on the sap. The larvæ of *Chrysopa* and also of some species of Coccinellidæ have been observed feeding upon these acarians, and no doubt devour many of the larvæ of *Cecidomyia aceris* (Trans. Am. Ent. Soc. i. p. 281) which were abundant on the leaves.

*Mt. Carroll, Illinois*, April 1st, 1869.